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Canyon Fuel Company **Internal Correspondence**

Incoming
C/007/0039
Copy Wayne W.

Date: August 11, 2004

To: Vicky Miller

From: David G. Spillman

Subject: Subsidence Considerations – SITLA Lease

As requested, the following is a brief description regarding potential subsidence associated with our current "barrier case" mine layout.

Longwall mining commenced at the Dugout Canyon Mine in April 2001. At that point in time, the Rock Canyon seam layout consisted of four longwall panels. These panels were aligned immediately adjacent to each other, without load supporting barrier pillars. This plan was implemented in an attempt to maximize resource recovery. However, this layout was considered aggressive, due to the potential of unfavorable caving conditions of the overlying geologic strata. This strata or overburden included three significant sandstone members; the Castlegate SS, Upper Sunnyside SS and Lower Sunnyside SS. These three SS members were believed to be somewhat subsidence resistant and had potential to form a "lagging cave" condition.

Subsequently, lagging cave conditions were confirmed during the mining of the second, third and fourth Rock Canyon longwall panels. In fact, significant portions of the second and third panels were abandoned due to unsafe mining conditions.

Based on our actual mining experience, as well as, extensive geotechnical analysis, it was determined that load supporting barriers would be necessary for future longwall panels. These barriers will essentially isolate individual panel extraction areas, while providing long-term support for the subsidence resistant SS members. This mine plan design will not allow for fracturing and caving to propagate to the surface, thus minimizing the potential for subsidence.

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